

**REMARKS**

In this Amendment, claim 1 has been amended to incorporate the subject matter of claim 3 and claim 3 has been cancelled.

Claims 4 and 5 have been amended to delete "isophthalic acid" as an essential carboxylic acid for the polyester.

No new matter has been added and entry of this Amendment is respectfully requested. Upon entry of the Amendment, claims 1-2 and 4-5 are all the claims pending in the application.

Claims 1-5 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Murakami et al (U.S. pat. No. 4,818,791).

Murakami et al are relied upon to teach a thermosetting powder composition comprising a polyester having reactive groups, a vinyl polymer having reactive groups and a curing agent. Murakami et al are also relied upon to disclose that the polyester can be prepared from polycarboxylic acids including isophthalic acid and polyhydric alcohol including neopentyl glycol, and that the vinyl polymer can be prepared from monomers including vinyl ester and fluoroolefin.

Applicants respectfully submit Murakami et al do not render *prima facie* obvious the present invention.

Murakami et al teach a resin composition for use in a powder paint comprising: (A) a polyester, (B) (B-1) a vinyl polymer containing both (beta-methyl)glycidyl and hydroxyl groups, or (B-2) a (beta-methyl)glycidyl group-containing vinyl polymer and (B-3) a hydroxyl group-containing vinyl polymer, and (C) a blocked isocyanate (column 1, line 57-column 2, line 39).

Murakami et al also disclose that in the preparation of B-1, another vinyl monomer, i.e., a vinyl ester or a fluorine-containing vinyl monomer, may be used together with the (beta-

methyl)glycidyl group-containing vinyl monomer and the hydroxyl group-containing vinyl monomer (column 4, lines 3-31).

However, Murakami et al do not teach or suggest a polymer containing both a vinyl ester unit and a fluoroolefin unit as presently claimed. That is, although Murakami et al disclose that B-1 can include another vinyl monomer selected from (meth)acrylic esters, aromatic vinyl monomers, nitrogen-containing vinyl monomers, certain diesters, vinyl ester and fluorine-containing vinyl monomers, Murakami et al do not teach the description of the specific combination of a fluoroolefin unit and a vinyl ester unit with reactive groups as presently claimed.

Further, Murakami et al do not teach or suggest 1,4-cyclohexane carboxylic acid as the essential carboxylic acid for the polyester as presently claimed in claims 4 and 5.

In view of the above, the Examiner is respectfully requested to reconsider and withdraw the rejection.

Claims 1, 2, 4 and 5 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over JP '276.

JP '276 is relied upon to teach a thermosetting powder coating composition comprising a polyester having reactive groups, a fluorine-containing polymer having reactive groups and a curing agent, wherein the polyester can be prepared from isophthalic acid and 2,2'-diethylpropanediol and the fluorine-containing polymer can be prepared from vinyl acetate.

It is further asserted that JP '276 suggests combining a fluorine-containing polymer having reactive groups prepared from fluoroolefin and vinyl ester with a polyester having reactive groups and a curing agent.

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. No. 09/869,430

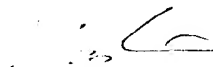
Applicants respectfully submit that JP '276 does not render *prima facie* obvious the present claims 1, 2, 4 and 5 as amended, and accordingly, the rejection should be withdrawn.

In this Amendment, Applicants have amended claim 1 to incorporate the subject matter of claim 3, which has not been rejected over JP '276. Applicants have also amended claims 4 and 5. The amended claims 4 and 5 recite 1,4-cyclohexane carboxylic acid as the essential acid for the polyester, which is not disclosed or suggested in JP '276. Further in this regard, Applicants submit herewith a partial English translation of JP '276 for the Examiner's review and consideration.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



---

Fang Liu  
Registration No. 51,283

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE



23373

PATENT TRADEMARK OFFICE

Date: February 27, 2003

**APPENDIX**  
**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS:**

**Claim 3 is canceled.**

**The claims are amended as follows:**

1. (amended) A thermosetting powder coating composition which comprises a fluorine-containing polymer (A) comprising a fluoroolefin unit and ~~a vinyl ester unit~~ vinyl versatate unit and/or vinyl benzoate unit and having a crosslinkable reactive group, a polyester polymer (B) having a crosslinkable reactive group, and a curing agent.
4. (amended) A thermosetting powder coating composition which comprises a polyester polymer (I) containing ~~isophthalic acid and/or~~ 1,4-cyclohexane dicarboxylic acid as the essential component and having a crosslinkable reactive group, a fluorine-containing polymer (II), and a curing agent.
5. (amended) The powder coating composition of Claim 4, wherein said polyester polymer (I) is a polyester polymer containing ~~isophthalic acid and/or~~ 1,4-decarboxylic acid as a polybasic acid component and a polyhydric alcohol as a polyol component, in which hydrogen at  $\beta$  position has been substituted by an alkyl group.

JP 3-95276A  
FEB 27 2003

- 1 -

JP3-95276A (Translation-in-part)

Title of the invention:

THERMOSETTING POWDER COATING COMPOSITION

Application No.: 151340/1990

Filed on: June 8, 1990

Page 6, Lower Left-hand Column, Line 16 to Page 7 Upper Left-hand Column, Line 9

Examples of preferred polyester resin are, for instance, condensates of carboxylic acids mainly comprising terephthalic acid and being capable of forming polyester and polyhydric alcohols mainly comprising ethylene glycol. Examples of the carboxylic acid component are, for instance, phthalic acid, trimellitic acid, pyromellitic acid, anhydrides thereof, terephthalic acid, isophthalic acid, methylterephthalic acid, adipic acid, sebacic acid, succinic acid, fumaric acid,  $\beta$ -oxypropionic acid, oxalic acid, glutaric acid and the like. Those carboxylic acids may be used alone or in a combination of two or more thereof.

Examples of the polyhydric alcohol component are, for instance, ethylene glycol, propanediol, butanediol, pentanediol, 1,6-hexanediol, neopentyl glycol, 2,2'-diethyl propanediol, cyclohexanediol, trimethylol propane, pentaerythritol and the like. Those polyhydric alcohols may be used alone or in a combination of two or more thereof.

Examples of the polyester resin are, for instance, those

available on the market such as ESTER RESIN ER-6640, ER-6650, ER-6680, ER-8105 and ER-8107 (trade names of NIPPON ESTER KABUSHIKI KAISHA), FINEDIC M-8020, M-8075, M-8500, M-8620, M-8900, A-239-J and A-239-X (trade names of DAINIPPON INK & CHEMICALS, INC.), U-PiCA COAT GV-100, GV-150 and GV-230 (available from Japan U-PiCA Company, Ltd.), URALACK P-2065, P-2400, P-3500 and P-5000 (trade names of DSM COMPANY) and the like.